

**NORTH CAROLINA DIVISION OF MEDICAL  
ASSISTANCE  
MANAGED CARE SECTION  
QUALITY MANAGEMENT UNIT**

**BASELINE MEDICAID HEDIS® PROJECT 2000  
YEAR ONE REMEASURE 2001**

**Reporting Year: 2000, 2001  
Measurement Year: 1999, 2000**

**Prepared by:  
NC DMA Managed Care Quality Management Unit  
in collaboration with the NC DMA Decision Support**

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**NORTH CAROLINA DIVISION OF MEDICAL ASSISTANCE  
MANAGED CARE QUALITY MANAGEMENT UNIT  
BASELINE AND YEAR ONE REMEASURE  
MEDICAID HEDIS® PROJECT**

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## **Introduction**

The Medicaid product within North Carolina consists of various systems of care: (1) Carolina ACCESS, a Primary Care Case Management (PCCM) model where Medicaid recipients choose a primary care provider who manages the health care services of the recipient; (2) Health Care Connection, mandatory enrollment Medicaid health maintenance organization (HMO) program or federally qualified health center (FQHC) (3) Carolina ACCESS II/III, an enhanced PCCM model and (4) fee-for-service. The objectives of the managed care models are: (1) to ensure cost effectiveness; (2) to assure appropriate use of health care services and (3) to improve access to primary and preventive care. In an effort to begin to evaluate the quality of care between systems of care, the Quality Management (QM) unit of the North Carolina Division of Medical Assistance Managed Care section collaborated with Decision Support and State Center for Health Statistics staff to begin the NC Medicaid HEDIS Project. The objective of this project is to initiate an annual review of: (1) the effectiveness of care; (2) the access/availability of care and (3) the use of services across the Medicaid systems of care in North Carolina. Comparisons between systems of care offering Medicaid are useful in identifying systems of care that work well to deliver quality health care.

For the purposes of this project, the American Public Human Services Association (APSHA) Medicaid Database Project (Data for 1999) and the National Medicaid Results for Selected 2000 HEDIS and HEDIS/CAHPS measures were used as nationally recognized benchmarks (APHSA website, L. Partridge, 2001) (NCQA website, 2001). HEDIS Technical Specifications were the source of the specifications for each measure. Administrative data reporting was determined be the best use of personnel resources for the benchmark measurement year, calendar year 1999 and the year one remeasure year 2000. Annual HEDIS reports submitted by the contracting HMOs collected through administrative and hybrid (both administrative data and medical record review) means are included in this project report to reflect the variance between administrative and hybrid data.

## **Background**

The need for establishment of quality and utilization indicators is recognized within managed care as key to understanding and improving the health care delivery systems within the North Carolina Medicaid population. The objectives of the managed care models are: (1) to ensure cost effectiveness; (2) to assure appropriate use of health care services and (3) to improve access to primary and preventive care. Within the Quality Management Unit, establishing a means to evaluate these indicators became a primary concern for the year 2000. In order to address these reporting requirements, a group was formed with members representative of Quality Management, Decision Support and the State Center for Health Statistics.

Discussions within this group focused on HEDIS (Health Plan Employer Data Information Set) as a widely utilized and accepted set of performance measures in the commercial health insurance population. Several key quality and utilization measures were selected from the HEDIS set of measures for a first year benchmarking effort and a one-year remeasurement. The discussion group agreed that it was important not only to produce indicators of quality for the entire Medicaid population as an entire Section, but also to produce indicators of quality by the various systems of care.

In 1998, APHSA contracted with the NCQA (National Committee for Quality Assurance) to collect data for the National Medicaid HEDIS Database/Benchmark Project to establish benchmarks for selected HEDIS Effectiveness of Care, Access to Care and Use of Services measures for the Medicaid managed care populations. Data in this project report is compared to the National Medicaid Results for Selected 2000 HEDIS and HEDIS/CAHPS measures as reported on the NCQA website.

Good health care is better defined as the right service, at the right time, at the right place, for the right person. Comparisons can highlight differences in delivery systems that may need to be extended to all recipients. HEDIS is one method that identifies, within the subset of the measures, delivery systems that are well managed. Comparisons can highlight differences in delivery systems that may need to be extended to all recipients. The standardized reporting allows for measurements of change over time by statistical methods. The establishment of this national Medicaid HEDIS database allows states to compare systems of care rates to the national database benchmarks. The benchmarks allow states to plan and establish performance goals, which will allow for improving the healthcare delivery system for their Medicaid managed care programs. Areas for improvement can be identified and quality initiatives can be implemented as interventions to improve access or quality of care. Remeasurements are then made periodically to evaluate the effectiveness of those interventions.

## **Methodology**

### ***Quality Indicators***

The quality indicators chosen for this project are consistent with those of HEDIS® 2000 and 2001 as follows:

#### **Effectiveness of Care**

##### **1. Childhood Immunization**

The percentage of enrolled Medicaid children who turned two years old during the measurement year, who were continuously enrolled for 12 months immediately preceding their second birthday, who were identified as having had four DTP/DtaP, three IPV/OPV, one MMR, two H influenza type b, three hepatitis B and one VZV (Varicella, chicken pox) vaccine by the second birthday. The allowable gap in enrollment for Medicaid members for whom enrollment is verified monthly is no more than 1 month.

## **2. Adolescent Immunization Rates**

The percentage of enrolled Medicaid adolescents who turned thirteen years old during the measurement year, were continuously enrolled for 12 months immediately preceding their thirteenth birthday and who were identified as having had a second dose of MMR, three hepatitis B and one VZV (Varicella) vaccine by their thirteenth birthday. Allowable gap in enrollment for Medicaid members for whom enrollment is verified monthly is no more than 1 month.

## **3. Breast Cancer Screening Rates**

The percentage of enrolled Medicaid women age 52 through 69 years, who were continuously enrolled during the measurement year and the preceding year, and who had a mammogram during the measurement year or the preceding year. Allowable gap in enrollment for Medicaid members for whom enrollment is verified monthly is no more than 1 month.

## **4. Cervical Cancer Screening Rates**

The percentage of enrolled Medicaid women age 21 through 64 years, who were continuously enrolled during the measurement year and who received one or more Pap tests during the measurement year or the two years prior to the measurement year. Allowable gap in enrollment for Medicaid members for whom enrollment is verified monthly is no more than 1 month.

## **5. Rate of Prenatal Care in the First Trimester by System of Care**

The percentage of enrolled Medicaid women who delivered a live birth during the measurement year, who were continuously enrolled for 280 days prior to delivery and who had a prenatal care visit(s) on or between 176 days to 280 days prior to delivery (or Estimated Date of Delivery (EDD), if known). Allowable gap in enrollment for Medicaid members for whom enrollment is verified monthly is no more than 1 month.

## **6- Diabetic Retinal Exams**

The percentage of enrolled Medicaid members who had an eye exam in the measurement year by an eye care professional (Optometrist or Ophthalmologist). It was also allowable to count an eye exam that was performed in the year prior to the measurement year if the Medicaid member met at least two of the following three criteria:

- The Medicaid member was not prescribed or dispensed insulin during the measurement year
- Medicaid member had an examination by an eye care professional with no evidence of retinopathy during the year prior to the measurement year **(negative diagnosis was not verified by medical record review as administrative data alone was used to calculate the measures)**. For all Medicaid members eligible for the two year eye exam time frame, it was allowable to count an eye exam in the measurement year or the year prior to the measurement year as documented through administrative data using the specified CPT and ICD-9 codes as defined in the HEDIS® 2000 Technical Specifications.

Allowable gap in enrollment for Medicaid members for whom enrollment is verified monthly is no more than 1 month.

#### **Access/Availability of Care Measures:**

##### **6. Children's Access to Primary Care Practitioners**

The percentage of enrolled Medicaid children age 12 months through 24 months and 25 months through 6 years who were continuously enrolled during the measurement year and who had a visit with a PCP during the measurement year.

The percentage of enrolled Medicaid children age 7 years through 11 years who were continuously enrolled during the measurement year and the calendar year preceding the measurement year and who had a visit with a PCP during the measurement year or the calendar year preceding the measurement year. Allowable gap in enrollment for Medicaid members for whom enrollment is verified monthly is no more than 1 month.

#### **Use of Services Measures:**

##### **1. Well Child Visits Birth through 15 Months**

The percentage of enrolled Medicaid members who turned 15 months old during the measurement year, who were continuously enrolled in the system of care from 31 days of age, and who received either zero, one, two, three, four, five, or six or more well-child visits with a Primary Care Practitioner during their first 15 months of life. Allowable gap in enrollment for Medicaid members for whom enrollment is verified monthly is no more than 1 month.

##### **2. Well Child Visits Ages 3 Through 6 Years**

The percentage of enrolled Medicaid members who were three, four, five or six years old during the measurement year, who were continuously enrolled during the measurement year, and who received one or more well-child visit(s) with a Primary Care Practitioner. Allowable gap in enrollment for Medicaid members for whom enrollment is verified monthly is no more than 1 month.

##### **3. Ambulatory Care**

This measure summarizes utilization of ambulatory services in the following categories: Outpatient Visits, Emergency Department Visits, Ambulatory Surgery/Procedures performed in hospital outpatient facilities or freestanding surgical centers and Observation Room Stays that results in discharge. Individual descriptions of each category are outlined in the HEDIS® 2000 Technical Specifications.

#### **4. Inpatient Utilization- General Hospital/Acute Care**

This measure summarizes utilization of acute inpatient services in the following categories: total services, medicine, surgery, and maternity. Individual descriptions of each category are outlined in the HEDIS® 2000 Technical Specifications. Nonacute care, mental health and chemical dependency services, as well as initial newborn care, are excluded. Medical and surgical services are reported separately because the factors influencing utilization in these two categories vary. This also facilitates comparisons between ambulatory surgery utilization and inpatient surgery utilization.

#### ***Sample Selection***

Sample populations for each measure and for each system of care were selected based on the HEDIS technical specifications.

North Carolina Medicaid pays co-insurance and deductibles for Medicare recipients who also qualify for Medicaid. Therefore, it was decided to include “dual eligibles” or those recipients who have both Medicare and Medicaid in the measure denominators.

#### ***Data Collection***

Since there are many differences between a Medicaid product and a commercial product, it was initially felt that major changes to HEDIS® would be needed in order to produce a realistic view of quality. The main item of concern is the time period in which recipients are required to remain in the same system of care. Medicaid recipients are allowed to change systems of care on a monthly basis and this ability led to concerns regarding a realistic view of the preventive health services that is provided within the specific systems of care. After initial discussion of modifying the continuous enrollment criteria in HEDIS®, it was decided that in order to allow for appropriate comparison of the NC Medicaid results to national benchmarks, the exact criteria within HEDIS® would be used whenever possible to produce results for the individual measures.

#### ***Systems of Care***

For each HEDIS measure there is a continuous enrollment period and/or an anchor date. The continuous enrollment period is the time in months that the recipient is required to be enrolled in Medicaid before a particular date or event. Since Medicaid utilizes a monthly enrollment period, months are utilized to determine the continuous enrollment period. The anchor date is a date in time that the recipient is required to be enrolled in Medicaid. In order to be eligible for the population in the measure, the recipient must have met Medicaid continuous enrollment criteria, anchor date criteria, as well as any other specific criteria such as age, gender, medical diagnosis or previous procedure/condition.

Within the Data Warehousing system (DRIVE), monthly enrollment segments are available for use in determining Medicaid eligibility for each of the measures. For the HMO and PCCM systems, there are no corresponding monthly enrollment segments. There are however, monthly records of premiums paid for recipients enrolled in an HMO and also, monthly records of management fees paid for recipients enrolled in a PCCM.

The PCCM records also differentiate the enrollment between Carolina Access and ACCESS II/III. These monthly records exist as claims and are utilized in order to determine the system of care that the recipient belonged to if they met the enrollment criteria. The method used to determine fee-for-service is that continuous enrollment was met and the recipient was not in an HMO or PCCM. In summary, the definitions of the systems of care are:

1. HMO – met continuous enrollment within an HMO, defined by having a MMF paid for that recipient during the continuous enrollment period
2. Carolina Access – met continuous enrollment within the PCCM Carolina Access, defined by having a MMF paid for that recipient for that PCCM during the continuous enrollment period
3. ACCESS II/III- met continuous enrollment within the enhanced PCCM ACCESS II/III, defined by having a MMF paid for that recipient for that PCCM during the continuous enrollment period
4. Fee-for-Service – met continuous enrollment within Medicaid but did not meet continuous enrollment within an HMO or PCCM.

**\*\*Note:** No HealthChoice (SCHIP) children are included in the results. Their claim data is processed by a different fiscal agent and was not available at the time of reporting.

#### **Paid versus Denied Claims/Encounters**

A claim is a medical claim paid by the fiscal agent. An encounter is a record submitted by the HMO, which relates applicable information regarding services paid by the HMO. Only paid encounters are submitted by the HMO. Since only the paid encounters are available for HMOs, it was decided to retrieve paid claims for all other Medicaid recipients. This was decided in order to make the data comparable.

#### **Retrieval Dates and Claim Availability**

Data was retrieved using a 6-month lag for claims. This is an adequate time lag for office-based visits but may result in undercounting inpatient visits. This is indeed true for the HMO data, which is loaded into our Data Warehouse system after submission from the HMO, and pricing information is added to the encounter.

**Definitions:**

**Primary Care Provider (PCP)** – in order to maintain consistency between the systems of care, the following were defined as primary care providers:

Provider Specialty	Description
001	General /Family Practice
010	Federally Qualified Health Center (FQHC)
011	Internal Medicine
037	Pediatrics (includes Pediatric Nurse Practitioner)
061	CRNA or Nurse Practitioner
063	Nurse Midwife
070	Multi-specialty
060	Public Health Departments
075	Rural Health Clinic

**EPDST – Early and Periodic Screening, Diagnosis and Treatment codes**

NC Code	Description
W8010	Periodic, Regular Screenings
W8016	Interperiodic Screening Visits

**HMO – Health Maintenance Organizations contracted with NC Medicaid during the span of the measurement years**

Provider Number	HMO Name
6700003	Carolina Permanente Medical Group (Kaiser)
6700004	Atlantic Health Plans
6700005	Maxicare North Carolina Inc.
6700006	Generations Family Health Plan
6700007	The Wellness Plan of NC
6700008	Optimum Choice of the Carolinas
6700010	United Healthcare of NC Inc.
6700011	Principal

**Utilization per thousand member months**

(Total discharges/member months) x 1000

**Utilization per thousand members**

(Total discharges/member months) x 1000 x 12

## Results

### ***Data Limitations For Interpretation of Results***

This section provides information on the data definitions and data limitations found while compiling the data. Understanding these limitations will allow the reader to better interpret the resulting quality and/or utilization rates:

- **Exclusions: All measures**

Data for the measures was retrieved from the Data Warehouse, which only contains a rolling three-year time period. Due to this 3-year time period, some exclusions which may have occurred earlier might not have been identified.

- **Administrative vs. Hybrid Data**

It should be noted that all NC DMA rates produced in this report have been calculated using only administrative data and no medical record reviews were conducted for these measurements. It should also be noted that HEDIS rates self-reported by the Medicaid HMOs were collected using administrative and hybrid data. As a result, the self-reported Effectiveness of Care rates from the HMO data are higher than the aggregate HMO Effectiveness of Care rates produced in the report.

- **HMO Encounter Data Reporting**

NC DMA has a process of receiving and checking encounter data from the contracted HMOs that involves comparing the submissions against certain established criteria. Upon review the encounter data is then either sent back to the HMO for correction or accepted as "clean" data into the Data Warehouse. This process of receiving and checking is time consuming and increases the lag time for the availability of the encounter data. Therefore, we acknowledge that HMO data in this report is under-reported due to the unavailability of some encounter data at the time of the data retrieval.

## **Conclusions:**

In 2000, the Managed Care Section of the Division of Medical Assistance began collecting HEDIS data in HMOs, PCCMs, & FFS settings to analyze performance over time & across delivery systems. Arriving at the closure of this project we have identified the following issues:

- There is a need to have processes in place to audit data entry for DMA information systems.
- There is a need to have HMO encounter data submission process reviewed and updated.
- Managed Care Data Advisory Committee must have a concentrated focus on encounter data, validating/auditing, HEDIS measures, etc to include representatives from QM, Decision Support/State Center for Health Informatics and Statistics, EDS, and the HMOs, including QM, Claims Processing/Encounter Data Submission Specialists, and Data Analyst staffs.
- DMA Managed Care and/or it's' representatives should continue to work closely with the HMOs to ensure appropriate and timely encounter data submissions.
- HIPAA will resolve many issues surrounding home-grown codes and bundling of services to improve identification of services rendered.
- This project is a representation of the documentation of care as demonstrated by the administrative data available in July 2000 and August 2001.

## **Plans For Improvement:**

The NC DMA Quality Management (QM) unit, in cooperation with the DMA Decision Support staff, has established baseline and year one remeasure data for the specified HEDIS® 2000 and 2001 Effectiveness and Access/Availability of Care and Use of Services measures and compared the results to the APHSA Medicaid HEDIS Database Project (Data 1999) and the National HEDIS® Medicaid Year 2000 benchmarks. The QM unit will seek the advisement of the DMA Managed Care Physician Advisory Committee and the input of the contracting HMOs to determine focused areas for quality improvement and to establish goals for each area identified for improvement. Furthermore, quality initiatives will be identified and interventions will be implemented in efforts to impact care and services. Upon appropriate time frames to allow an impact on care and services, further remeasurements will be conducted to evaluate the effectiveness of the interventions. Ongoing annual analysis of HEDIS® measures across NC DMA systems of care will be accomplished in order to continually evaluate level of services administered to our Medicaid recipients.

If there are questions regarding this document, please contact the NC DMA Quality Management Department at 919-857-4022.

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